

PATENT  
Serial No. 10/540,635

Amendment in Reply to Office Action mailed on February 28, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~Optical~~ An optical device comprising: a polymer film ~~(101)~~ comprising a first surface ~~(107)~~ and a second surface ~~(108)~~, a first electrode ~~(102)~~ mapped on said first surface ~~(107)~~, a second electrode ~~(103)~~ mapped on said second surface ~~(108)~~, a deformable optical element ~~(104)~~ mapped on said first electrode ~~(102)~~ or on said first surface ~~(107)~~, wherein said deformable optical element is configured to deform substantially along at least one of a direction radial to an optical axis of said deformable optical element and a plane parallel to said polymer film.

2. (Currently Amended) ~~Optical~~ The optical device as claimed in claim 1, wherein said optical element ~~(104)~~ is a circular lens

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or a diffraction grating.

3. (Currently Amended) ~~Optical~~ The optical device as claimed in claim 1 or 2, wherein said optical element ~~(104)~~ is made of silicone rubber or of cyclic olefin copolymer.

4. (Currently Amended) ~~Optical~~ The optical device as claimed in claim 1, ~~2 or 3~~, wherein said polymer film ~~(101)~~ is made of silicone rubber or acrylic dielectric elastomer.

5. (Currently Amended) ~~Optical~~ The optical device as claimed in claim 1, ~~2, 3 or 4~~, wherein said first electrode ~~(102)~~ and said second electrode ~~(103)~~ have the shape of a circle.

6. (Currently Amended) ~~Optical~~ The optical device as claimed in claim 1, ~~2, 3 or 4~~, wherein said first electrode ~~(102)~~ and said second electrode ~~(103)~~ have the shape of a ring.

7. (Currently Amended) ~~Polymer~~ An optical device comprising:  
a polymer film;

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a plurality of electrodes; and  
an optical element in contact with the polymer film or at  
least one of said plurality of electrodes;  
the polymer film (101) being sandwiched between the two  
electrodes (102, 103) intended and configured to receive a voltage  
difference, for deforming an the optical element (104) in contact  
with said polymer film (101) or said electrodes (102, 103),  
wherein the deformable optical element is further configured to  
deform substantially along at least one of a direction radial to an  
optical axis of the deformable optical element and a plane parallel  
to the polymer film.

8. (Currently Amended) Method A method of changing the optical characteristics of an optical element ~~(104)~~, said method comprising the steps acts of:

mapping a first electrode ~~(102)~~ on a first surface ~~(107)~~ of a polymer film ~~(101)~~,

mapping a second electrode ~~(103)~~ on a second surface ~~(108)~~ of said polymer film ~~(101)~~,

mapping said optical element ~~(104)~~ on said first electrode

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~~(103)~~ or on said first surface ~~(107)~~, and

applying a voltage difference between said first electrode

~~(102)~~ and said second electrode ~~(103)~~,

wherein, in response to said applying act, said optical element is configured to deform substantially along at least one of a direction radial to an optical axis of said optical element and a plane parallel to said polymer film.